

## REMARKS/ARGUMENTS

The claims have been amended by a formal change to eliminate “type of” from claim preambles which improves the claim form without changing its substance.

Claim 1 has been amended by inclusion therein of claim 2 and a change in the incorporated Markush group to delete SiC.

Product claims 1-4 have been rejected under 35 U.S.C. § 102 over Jatkar and product claims 1 and 4 were rejected under 35 U.S.C. § 102 over Narula. Reconsideration is requested in that claim 1 has been amended to include therein the elements of claim 2.

As to the prior art, Jatkar discloses a silicone carbide (SiC) aluminum alloy matrix composite but does not disclose composites comprised of the members of the Markush group in claim 1. Correspondingly, Narula does not disclose composites made from any of the members of the Markush group in claim 1. The members of the group have the characteristics described in the summary of Applicant's invention, which include the reinforced particles being dispersively and uniformly distributed in an aluminum alloy matrix and forming interfacial bonding with the matrix, have high hardness, high elastic modules and strength and low density and are capable of being used according to the methods disclosed in the specification hereof.

Jatkar does not disclose the reinforced particles selected from the Markush group consisting of  $B_4C$ ,  $Al_2O_3$  and  $AlN$  and does not suggest use of such components as reinforced particles. Similarly, Narula does not disclose particles selected from the group of particles in the Markush group of claim 1. Claims 1-4 are not anticipated by either Jatkar or Narula nor, it is submitted are they obvious, because nothing in either prior art reference suggests that the specific reinforced particles recited in Applicant's claim 1 could be used in the composites disclosed in those references.

Claims 5-7, 9-16, 18 and 20-22 were rejected under 35 U.S.C. § 103 over Mukarami et al. in view of Bomford et al. and Carden et al. Reconsideration is requested.

Contrary to the analysis of each of the references in this section of the rejection, none of the cited prior art discloses semi-solid die-cast forming to produce a near net shape composite component.

For example, Carden is alleged to disclose "softening the composite in the interior of the billet to form a semi-solid and die-casting the semi-solid by extruding the semi-solid billet through a die." However, this rejection is based on a mistaken understanding of the meaning of "semi-solid" in claim 5, which in the context of this invention means that the material is partly solid and partly liquid or alternatively has the qualities of both a solid and a liquid. On the other hand, "extrusion" implies that the material is in the form of a solid (which may be soft sufficiently), and the solid is forced through a die. Extrusion as in Carden, on the one hand, and semi-solid die-cast forming of claim 5 on the other hand, are very different processes. Therefore, a process involving extrusion would not show or suggest Applicant's process of claim 5.

As noted in the Abstract of Mukarami, the process there involves extruding the billet and therefore this does not show or suggest the method of claim 5.

For the foregoing reasons, claim 5 is distinguishable from each of the references cited against it and from the combinations thereof, and claim 5 and the claims dependent upon claim 5 are allowable.


The Applicant appreciates the indication of allowability of claims 8, 17 and 19. In view of the allowability of claim 5 on which these claims are dependent, the claims remain in dependent form and their allowance, along with the allowance of their parent claim, is requested.

In view of the foregoing, it is submitted that all of the claims remaining in the application are allowable and their allowance is requested.

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Robert C. Faber

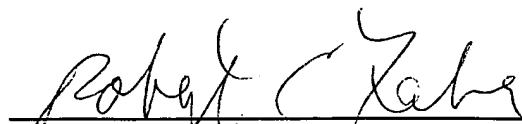
Name of applicant, assignee or  
Registered Representative

  
Signature

November 16, 2004

Date of Signature

Respectfully submitted,

  
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